

1-2. (Cancelled)

3. (Previously presented) The capacitance detecting proximity sensor of claim 22, wherein the environment in which the first detection electrode and the second detection electrode are disposed in the sensor structure is differentiated so that the spatial distance between the detection subject in the vicinity of the difference threshold and the first detection electrode and the spatial distance between the same detection subject and the second detection electrode are different.

4. (Previously presented) The capacitance detecting proximity sensor of claim 22, wherein the dielectric constants of a first dielectric disposed at the front side of the first detection electrode facing the detection subject and a second dielectric disposed at the front side of the second detection electrode facing the detection subject are made different, whereby the environment in which the first detection electrode and the second detection electrode are disposed in the sensor structure is differentiated.

5. (Previously presented) The capacitance detecting proximity sensor of claim 22, wherein the second detection electrode is disposed opposite from the front side of the first detection electrode facing the detection subject so that the second detection electrode is hidden from the difference threshold vicinity at a rear portion of the first detection electrode, whereby the environment in which the first detection electrode and the second detection electrode are disposed in the sensor structure is differentiated.

6. (Previously presented) The capacitance detecting proximity sensor of claim 22, wherein the first detection electrode, the second detection electrode and the sensor structure are configured in band-like shapes.

7. (Currently amended) The capacitance detecting proximity sensor of claim 6, including a shield electrode individually surrounding the divided electrodes wherein the shield electrode is formed in a rail shape having a substantially U-shaped cross section, with the first detection electrode and the second detection electrode being housed inside the U-shaped groove.

8. (Original) The capacitance detecting proximity sensor of claim 7, wherein the shield electrode comprises a rail-shaped insulation retention member having a substantially U-shaped cross section and metal foil disposed on the outer side of the U-shaped cross section.

9. (Previously presented) The capacitance detecting proximity sensor of claim 6, wherein the first detection electrode and the second detection electrode are band-like conductors formed in comb-like shapes having teeth and disposed so that when the sensor

structure is seen from the front side, the comb-like teeth alternately mesh together.

10. (Currently amended) The capacitance detecting proximity sensor of claim 6, wherein the first detection electrode and the second detection electrode are plurally divided, with ~~the~~ a shield electrode individually surrounding the divided electrodes.

11. (Previously presented) The capacitance detecting proximity sensor of claim 22, wherein the sensor circuit includes a first capacitance detection circuit that measures the capacitance to ground of the first detection electrode, a second capacitance detection circuit that measures the capacitance to ground of the second detection electrode, and a difference detection circuit that outputs the difference between the measured outputs of these two capacitance detection circuits.

12. (Original) The capacitance detecting proximity sensor of claim 11, wherein the first and second capacitance detection circuits are switched capacitor-type capacitance detection circuits.

13. (Previously presented) The capacitance detecting proximity sensor of claim 23, wherein the environment in which the first detection electrode and the second detection electrode are disposed in the sensor structure is differentiated so that the spatial distance between the detection subject in the vicinity of the difference threshold and the first detection electrode and the spatial distance between the same detection subject and the second detection electrode are different.

14. (Previously presented) The capacitance detecting proximity sensor of claim 23, wherein the dielectric constants of a first dielectric disposed at the front side of the first detection electrode facing the detection subject and a second dielectric disposed at the front side of the second detection electrode facing the detection subject are made different, whereby the environment in which the first detection electrode and the second detection electrode are disposed in the sensor structure is differentiated.

15. (Previously presented) The capacitance detecting proximity sensor of claim 23, wherein the second detection electrode is disposed opposite from the front side of the first detection electrode facing the detection subject so that the second detection electrode is hidden from the difference threshold vicinity at a rear portion of the first detection electrode, whereby the environment in which the first detection electrode and the second detection electrode are disposed in the sensor structure is differentiated.

16. (Previously presented) The capacitance detecting proximity sensor of claim 23, wherein the first detection electrode, the second detection electrode and the sensor structure are configured in band-like shapes.

17. (Previously presented) The capacitance detecting proximity sensor of claim 3, wherein the first detection electrode, the second detection electrode and the sensor structure are configured in band-like shapes.

18. (Previously presented) The capacitance detecting proximity sensor of claim 4, wherein the first detection electrode, the second detection electrode and the sensor structure are configured in band-like shapes.

19. (Previously presented) The capacitance detecting proximity sensor of claim 5, wherein the first detection electrode, the second detection electrode and the sensor structure are configured in band-like shapes.

20. (Previously presented) The capacitance detecting proximity sensor of claim 7, wherein the first detection electrode and the second detection electrode are band-like conductors formed in comb-like shapes having teeth and disposed so that when the sensor structure is seen from the front side, the comb-like teeth alternately mesh together.

21. (Cancelled)

22. (Currently amended) A capacitance detecting proximity sensor that electrostatically detects when a detection subject has come into proximity within a difference threshold, comprising:

a sensor structure housing a first detection electrode and a second detection electrode that are attached to a part that the detection subject comes into proximity, ~~the first detection electrode and the second detection electrode being~~ mutually electrically independent, both detecting surfaces of the first detection electrode and the second detection electrode being disposed opposing the detection subject that is approaching, the environment of the first detection electrode and the second detection electrode in the sensor structure being differentiated and configured so that when the detection subject is present in the vicinity of the difference threshold, the electrostatic environmental condition between the detection subject and the first detection electrode and the electrostatic environmental condition between the same detection subject and the second detection electrode being different; and

a sensor circuit for detecting and outputting the difference between a capacitance to ground formed by the first detection electrode and a capacitance to ground formed by the second detection electrode.

23. (Currently amended) A capacitance detecting proximity sensor that electrostatically detects when a detection subject has come into proximity within a difference threshold, comprising:

a sensor structure housing a first detection electrode and a second detection

electrode that are attached to a part that the detection subject comes into proximity, the first detection electrode and the second detection electrode being mutually electrically independent, and both detecting surfaces of the first detection electrode and the second detection electrode being disposed opposing the detection subject that is approaching, the environment of the first detection electrode and the second detection electrode in the sensor structure being differentiated and configured so that when the detection subject is present in the vicinity of the difference threshold, the electrostatic environmental condition between the detection subject and the first detection electrode and the electrostatic environmental condition between the same detection subject and the second detection electrode being different;

a sensor circuit for detecting and outputting the difference between a capacitance to ground formed by the first detection electrode and a capacitance to ground formed by the second detection electrode; and

wherein a shield electrode is disposed in the sensor structure so as to surround another portion of the difference threshold vicinity excluding a front side portion of the difference threshold vicinity facing the detection subject, and the first detection electrode and the second detection electrode being are electrostatically shielded by the shield electrode excluding the front direction;

the shield electrode being formed in a rail shape having a substantially U-shaped cross section, with the first detection electrode and the second detection electrode being housed inside the U-shaped groove.